



## Apprenticeship Program Roadmap

# Apprenticeship definition

The International Labor office defined apprenticeship in its Apprenticeship Recommendation (R60, 1939) as follows:

**“... the expression apprenticeship means any system by which an employer undertakes by contract to employ a young person and to train him [or her] or have him [or her] trained systematically for a trade for a period the duration of which has been fixed in advance and in the course of which the apprentice is bound to work in the employer's service.” (Para.1)**

Ryan P. , K . Wagner, S. Teuber, U. Backes-Gellner, 2010. Trainee Pay in Britain, Germany and Switzerland: Markets and Institutions SKOPE Research Paper No. 96 July.

**“ „Apprenticeship“ is taken to denote training programmes that combine vocational education with work based learning for an intermediate occupational skill (i.e., more than routinised job training), and that are subject to externally imposed training standards, particularly for their workplace component.”**

# Why did SCHOTT North America pursue apprenticeship

- **Significant shortage of required highly specialized worker skills**
  - Glass melting
  - Metal working (Platinum)
  - Masonry for tank building
  - Equipment maintenance
  
- **Aging work force – facing loss of local know how**
  
- **These challenges are virtually non existent in SCHOTT AG due to a well evolved worker training program including a solid apprenticeship program.**

# Agenda

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## Registered Apprenticeship Program



Registered Apprenticeship combines on the job training with related classroom instruction to create a highly-trained, skilled workforce.

Registering the program with the Department of Labor (DOL) means that you adhere to their regulations in return the apprentices will receive a nationally certified trade.

2 Apprenticeship Programs- Germany`s Latest Export

Many German companies are now starting apprenticeship programs in the United States



SIEMENS

BOSCH

DAIMLER

SCHOTT  
glass made of ideas



## Why your site should consider a Registered Apprenticeship Program

1. Improves the skills of your workforce
2. Increased productivity and knowledge transfer
3. Leadership opportunity/motivation tool for qualified incumbent workers
4. Systematic approach to training that can be used with other employees
5. Programs are flexible and can be customized to meet your needs
6. Potential tax benefits/support from state and/or federal government



## Quick Facts

**Age Requirement:** 16 or 18 if working night shifts.

**OJT Requirement:** min 2000 but based on DOL trade.

**Training Requirement:** 144 hours per year.

**Additional Requirement:**

Must be registered through the U.S. Department of Labor.

**Certification:** Issued through state government and nationally portable.

**Funding/requirements:** State government.

**Pay:** Paid a percentage of a journey worker's salary.  
Wage must be progressing.





## Apprenticeship Program in 10 Steps

1. Internal Needs Analysis/Succession Planning
2. Create Joint-Apprentice Committee (Mentors)
3. Develop Work Processes for On-The-Job Training
4. Identify Sources for Related Instruction/Funding
5. Internal Communication Strategy
6. Develop Selection Procedure/Requirements
7. Recruiting
8. Submit Program to State Apprenticeship Council
9. Onboarding
10. Sustainability



## Step 1- Internal Needs Analysis

### 1. Internal Needs Analysis

- Is an apprenticeship program right for my site?
- Does the site have the capacity to manage an apprenticeship program?
- Do I have support from our site manager?

### 2. Succession Planning

Tariff Beatty

Identify the trade needed and amount of apprentices

### 3. Match with U.S. Department of Labor Trades

Match this occupation with the DOL list of occupational apprenticeship

*If the apprenticeship trade you are looking for does not match with DOL trades just to match it as close as possible.*

*Example: Maintenance- Machinist DOL= Maintenance- Mechanic*



## Step 2- Create Joint Apprenticeship Committee (JAC)

### **If site is non-Union**

Members should consist of managers and non- managers and at least one member should come from the same department as the apprentices.

### **If site is Union**

Members should consist of union and non-union members. Involve the Union early on to get their feedback.

### **Weekly meetings**

-if no routine is created, the program will get lost in the shuffle of daily life

### **Where can I get support?**

Committee is strongly recommended to participate in the Train-the-Trainer program in Mainz. Please contact Nina Moyer or Anne Marie Martin





## Step 2- Create Joint Apprenticeship Committee (JAC)

### **DUTIES OF THE COMMITTEE**

- To determine the work processes required for each trade to provide the necessary experience and training on the job.
- To determine the specific related instruction necessary for the trade.
- the terms and conditions of these Standards of Apprenticeship.
- To determine tests for determining the Apprentices.
- To certify to the Council the names of Apprentices who have satisfactorily completed their apprenticeships, requesting the issuance of Certificates of Completion of Apprentices.
- To formulate and carry out plans to create and maintain interest in the Apprenticeship Program.



## Step 3- Develop Work Process for On-the-Job Training

**Most time consuming step!**

### On-the-Job Training (OJT)

OJT= training that the apprentices will receive on the floor

- OJT checklists should be created for every department/work area
- OJT checklists should include all work processes that apprentices should know
- You must also include the estimated hours it will take for the employee to learn the various tasks
- JAC should work with the departments to create work processes

### Where can I receive support?

OJT curriculums are already created for multiple trades. These could be adapted to fit the needs of your site.

**Rolled Strip Qualification**

Trainee: Benjamin Lopez  
 Trainer: \_\_\_\_\_  
 Start Date: \_\_\_\_\_

	Yes	No	Completion Date	Initials
Demonstrates knowledge of continuous strip qualifications	<input type="checkbox"/>	<input type="checkbox"/>		
Demonstrates knowledge of top roller setup and ability to change roller sizes when required	<input type="checkbox"/>	<input type="checkbox"/>		
Knows how to properly insulate space between machine and Lehr	<input type="checkbox"/>	<input type="checkbox"/>		
Demonstrates ability to cool, clean and paint mold as required	<input type="checkbox"/>	<input type="checkbox"/>		
Demonstrates ability to hook up cooling lines properly	<input type="checkbox"/>	<input type="checkbox"/>		
Demonstrates ability to set correct pitch on machine	<input type="checkbox"/>	<input type="checkbox"/>		
Demonstrates knowledge of top roller cooling system	<input type="checkbox"/>	<input type="checkbox"/>		
Demonstrates ability to use starting device	<input type="checkbox"/>	<input type="checkbox"/>		
Demonstrates ability to adjust thickness using roller fixture stops	<input type="checkbox"/>	<input type="checkbox"/>		
Demonstrates ability to evaluate shape of edge detail on strip or glass puddle behind roller and adjust glass flow or Lehr speed to correct common defects-folds, NFO etc	<input type="checkbox"/>	<input type="checkbox"/>		
Demonstrates ability to dump mold safely by removing the roller setup first	<input type="checkbox"/>	<input type="checkbox"/>		
Demonstrates good housekeeping	<input type="checkbox"/>	<input type="checkbox"/>		

## Step 4- Identify Sources for Related Instruction/Funding

### Training

1. Identify training needs
2. Research local schools for offerings
3. Research alternative resources
4. Match training with OJT

### Funding

1. Ask your state DOL representative
2. Contact your local employment office
3. Research online

### Alternative Training resources used by Duryea/Lebanon



**PENN FOSTER**  
CAREER SCHOOL



**TOOLINGU**  
an SME company

## Step 5- Internal Communication Strategy



1. Define roles and responsibilities
2. Managers should be involved early on
3. Include group leaders/shift supervisors in the process
4. Program should be communicated multiple times directly to employees before the start of the program to receive feedback and ease fears. If this is not done, resentment or rejection of apprentices/program can occur.

## Step 6- Selection Procedures/Requirements

Affirmative action plan and selection procedures  
Preference for veterans /internal job referrals  
Age requirements

## Step 7- Recruiting

Internal job referrals  
Post online  
Job fairs at local technical schools or employment offices

We have found that we receive hundreds of applications for every opening





## Step 8- Submit Program

DOL requires and provides templates for the following:

### 1) Standards of Apprenticeship

Signed by employer and union /JAC

### 2) Apprenticeship Agreement

Signed by employer and each apprentice

### 3) Affirmative Action Plan with Selection Procedures

### 4) Affirmative Action worksheet

General Data: EIN, Union Local, total size of workforce



### Steps to become registered:

- 1) Submit above mentioned documents
- 2) 1 review- apprenticeship representative
- 3) Representative will present your program before the State Apprenticeship council
- 4) Council approves or rejects proposal

important



- Cannot submit until first apprentice is hired and/or signs agreement
- Most councils only meet once a month

# Step 9- Onboarding

Monday - 10/1/2012	
Time	Activity
8:00	Orientation
	Welcome address (site manager)
12:00	Lunch & Meet Appr Team
14:00	Plant Safety
17:00	Departure
Tuesday, 10/2/2012	
Time	Activity
9:00	Teambuilding
12:30	Lunch
15:00	SCHOTT History & Vision
17:00	Departure
Wednesday, 10/4/2012	
Time	Activity
8:00	Penn Foster Exam- Part 1
9:30	Lean Training
12:00	Lunch
13:00	Lean Training
16:30	Departure

Thursday, 10/4/2012	
Time	Activity
8:00	Forklift Training
12:00	Lunch
13:00	Forklift Training
16:30	Departure
Friday, 10/5/2012	
Time	Activity
8:00	Penn Foster Exam- Part 2
9:30	Intro. Quality
10:30	Gauges
11:00	Blueprint Reading
12:00	Lunch
13:00	Job Assignments (rotation plan, mentors)
	Plant tour
16:30	Departure



## Step 10- Sustainability

**Define and communicate roles and responsibilities**

**Create a feedback and accountability system**

**Personally check in with the Apprentices**



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## Learn from Experience- Duryea

**Start**      **October 2011**  
**Finish**    **October 2012**

### Program

<b>Start</b> 01/10/12	<b>Glass Operator Generalist</b>	<b>Mason- Metalsmith</b>	<b>Maintenance- Machinist</b>
<b>Apprentices</b>	6	1	2
<b>German Trade</b>	Verfahrens- mechaniker	-	Industrie- Mechaniker
<b>Length</b>	2 years	3 years	3 years
<b>Training Partners</b>	<ol style="list-style-type: none"> <li>1. Local Career Technical Centers</li> <li>2. ToolingU (online)</li> <li>3. Pennfoster (self-paced)</li> </ol>		

## Learn from Experience- Duryea

## Tips for Success

Enlist support from  
*COE- Training & Dev.*

Assign a  
coordinator to  
oversee the  
program

JAC should be  
employees where  
the apprentices  
will be placed

Establish weekly  
meetings in dev.  
phase

Communicate to  
managers and  
DOL early on

Participate in  
Train-the Trainer

Regular updates to  
managers and  
DOL

Meet with  
dept/crews to  
explain program

Support from site  
manager is  
crucial

# Apprenticeship Program Challenges / Concerns



- 1** Budget
  - Obtaining funds to ensure a successful program
  - *Estimated training costs for a two year program (\$10,000)*
- 2** Capacity
  - Program is in addition to normal duties
- 3** Sustainability
  - Obtaining headcount each year
- 4** No central program administrator
  - USA Apprenticeship Coordinator (*example*)
- 5** Integrating training into a shift system
- 6** Placing apprentices after the program

## Contact Information

### **General Program Consultation**

Anne Marie Martin

### **Tarif Beaty/ Succession Planning**

Gerry Barnes, Nina Moyer

### **OJT Checklists**

Sandy Herman, Anne Marie Martin

### **Train-the-Trainer Program**

Anne Marie Martin, Nina Moyer

### **Training/Funding Consultation**

Anne Marie Martin

### **Media/PR Coverage**

Matthew Kraft

